

REMARKS

Claims 41-74 are pending in the application.

Appropriate headings have been added to the specification, and claims from the literal translation have been replaced by claims drafted in conformity with U.S. Patent practice.

The application in its amended state is believed to be in condition for allowance. However, should the Examiner have any comments or suggestions, or wish to discuss the merits of the application, the undersigned would very much welcome a telephone call in order to expedite placement of the application into condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert W. Becker", with a stylized flourish at the end.

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For Examiner Reference

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 – 40: Cancelled

41. (New) A microfocus x-ray apparatus, comprising:
an x-ray tube (4) that is provided with a target (6)
means for bombarding the target with a target stream; and
means for regulating the intensity of x-ray radiation (20) that is produced, wherein
said means for regulating includes means for regulating at least one parameter of said target
stream, in particular a current strength of said target stream.
42. (New) A microfocus x-ray apparatus according to claim 41, wherein said target (6)
is disposed on a main body (8) of said x-ray tube (4) such that it is electrically insulated relative to
said main body.
43. (New) A microfocus x-ray apparatus according to claim 41, wherein a current
sensor (24) is provided for detecting an actual value of a current strength of said target stream.
44. (New) A microfocus x-ray apparatus according to claim 41, wherein said means
for regulating at least one parameter of said target stream includes a regulating device (22).
45. (New) A microfocus x-ray apparatus according to claim 44, wherein said
regulating device (22) compares a detected actual value of said target stream with a prescribed
desired value of said target stream and alters a control value in such a way that any difference
between said desired value and said actual value is minimized.
46. (New) A microfocus x-ray apparatus according to claim 41, wherein a high
voltage generator (12) is provided for producing a preferably essentially constant high voltage by

means of which electrons for generating an emission stream (14) of said x-ray tube (4) are accelerated in a direction toward said target (6).

47. (New) A microfocus x-ray apparatus according to claim 45, wherein said control value is an emission stream (14) of said x-ray tube (4).

48. (New) A microfocus x-ray apparatus according to claim 44, wherein said regulating device (22) is provided with an electrical or electronic control circuit that forms a controller.

49. (New) A microfocus x-ray apparatus according to claim 44, wherein said regulating device (22) is provided with an electronic control circuit that is adapted to be controlled by a regulation software in such a way that regulation is effected in a software-controlled manner.

50. (New) A microfocus x-ray apparatus according to claim 48, wherein said regulating device (22) is provided with an electronic control circuit that includes a microcontroller.

51. (New) A microfocus x-ray apparatus according to claim 41, wherein regulation of said target stream is adapted to be activated and deactivated.

52. (New) A microfocus x-ray apparatus according to claim 51, wherein a further regulating device is provided for regulating an emission stream (14) of said x-ray tube (4) when regulation of said target stream is deactivated.

53. (New) A microfocus x-ray apparatus according to claim 51, wherein a target stream that momentarily flows when regulation of said target stream is activated forms a desired value of said target stream.

54. (New) A microfocus x-ray apparatus according to claim 52, wherein an emission stream (14) that momentarily flows when regulation of said target stream is deactivated forms a desired value for regulation of said emission stream (14) by said further regulating device.

55. (New) A microfocus x-ray apparatus according to claim 44, wherein said

regulating device (22) regulates said target stream in such a way that an exceeding of a prescribed or prescribeable maximum electrical output of said target (6) is prevented.

56. (New) A microfocus x-ray apparatus according to claim 51, wherein after an activation of said x-ray tube (4) an activation of regulation of said target stream is effected in a chronologically delayed manner.

57. (New) A microfocus x-ray apparatus according to claim 56, wherein activation of regulation of said target stream is effected when an emission stream (14) of said x-ray tube (4) achieves a prescribed or prescribeable desired value.

58. (New) A microfocus x-ray apparatus according to claim 46, wherein regulation of said target stream is adapted to be activated and deactivated, and wherein upon an alteration of a desired value of said high voltage, a deactivation of regulation of said target stream is effected until a new desired value of said high voltage is achieved.

59. (New) A microfocus x-ray apparatus according to claim 45, wherein regulating parameters of said regulating device (22) are alterable as a function of said high voltage.

60. (New) A microfocus x-ray apparatus according to claim 59, wherein upon a reduction of said high voltage said regulating parameters are altered in such a way that a lag time of regulation of said target stream is increased, and wherein upon an increase of said high voltage said regulating parameters are altered in such a way that the lag time of the regulation is reduced.

61. (New) A microfocus x-ray apparatus according to claim 41, wherein said x-ray tube (4) is provided with means via which an emission stream of said x-ray tube can be deflected or blocked in such a way that a striking of said emission stream (14) upon said target (6) is essentially prevented.

62. (New) A microfocus x-ray apparatus according to claim 61, wherein regulation of said target stream is adapted to be activated and deactivated, and wherein upon activation of

said means for deflecting or blocking said emission stream (14) a deactivation of regulation of said target stream is effected.

63. (New) A microfocus x-ray apparatus according to claim 51, wherein means are provided for determining whether a short circuit is present at said target (6) and wherein upon determination of a short circuit, said determining means deactivate regulation of said target stream.

64. (New) A method of regulating the intensity of x-ray radiation produced by an x-ray tube (4) of a microfocus x-ray apparatus (2), wherein said x-ray tube is provided with a target (6) and with means for bombarding said target with a target stream, said method including the step of: regulating at least one parameter of said target stream, in particular a current strength of said target stream.

65. (New) A method according to claim 64, wherein an actual value of a current strength of said target stream is detected.

66. (New) A method according to claim 64, wherein a detected actual value of said target stream is compared with a prescribed desired value of said target stream and alters a control value in such a way that a difference between said desired value and said actual value is minimized.

67. (New) A method according to claim 64, wherein a high voltage generator (12) is provided by means of which a preferably essentially constant high voltage is produced via which electrons for producing an emission stream (14) of said x-ray tube (4) are accelerated in a direction toward said target (6).

68. (New) A method according to claim 67, wherein said emission stream (14) is used as a control value.

69. (New) A method according to claim 64, wherein regulation of said target stream is adapted to be activated and deactivated.

70. (New) A method according to claim 69, wherein an emission stream (14) of said x-ray tube (4) is regulated when regulation of said target stream is deactivated.

71. (New) A method according to claim 69, wherein a target stream that momentarily flows during activation of regulation of said target stream is used as a desired value of said target stream.

72. (New) A method according to claim 69, wherein an emission stream (14) of said x-ray tube (4) that momentarily flows upon deactivation of regulation of said target stream is used as a desired value for regulating said emission stream.

73. (New) A method according to claim 64, wherein said at least one parameter of said target stream is regulated in such a way that an exceeding of a prescribed or prescribeable maximum electrical output of said target (6) is prevented.

74. (New) A method according to claim 69, wherein upon an activation of said microfocus x-ray apparatus (2) regulation of said target stream is activated in a chronologically delayed manner.